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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SQUIRE, SANDERS & DEMPSEY L.L.P
600 HANSEN WAY
PALO ALTO, CA 94304-1043

EXAMINER

LE, DINH THANH

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,622

Applicant(s)

HAQ, EJAZ UL

Examiner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/10/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

NON-FINAL REJECTION

Claims 1-33 should be canceled accordance with the selection filed on 11/10/2003.

Correction is required.

The rejection under 35 USC 102 (b) over Arends et al. (US Pat. 5,463,211) was withdrawn since the claims were canceled.

Claims Objection

Claim 39 and 41 are objected to because they are the dependent of the canceled claims 5 and 7. Correction is required.

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 34-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 34, the description is incomplete because the “first signal circuitry” and “first reference circuitry” are not connected to anything and the system does not have an input/output. Thus the claimed system may not perform the recited function. Also, it is unclear how the “first set signals can be “converted” since no means for performing the converting function is required, and how the recitation “first signal circuitry”, “first set of signals”, “first pair of complementary oscillating voltage references” and “first reference circuitry” is read on the preferred embodiment. Insofar as understood, no such circuitry and signals can be determined on the

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drawings. The same is true for claim 38 and for reciting “circuitry” and a clock signal” in claim 43.

In claim 41, it is unclear how the oscillation of the references can “enable” a receiver and where the receiver comes from. The same is true for claim 42.

In claim 42, it is unclear how the reference can be “compared” since no means for performing the comparing function is recited.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 34 and 36-38 and 40-43 are rejected under 35 USC 102 (b) as being anticipated by Koide et al (US 5,483,110).

As understood, Koide et al discloses in Figures 1-15 a circuit comprising:

- a first signal circuitry (Q2) for transmitting a first set of signals (zero, .8V, lines 40-50);
- a first reference circuitry (INV2) for transmitting a first pair of complementary oscillating voltage references (VDD, ground) for enabling level conversion of the first set of signals;
- wherein the first signal circuitry includes transmission lines (1, 2) for half of the first set signals disposed on one side of the first reference circuitry (INV2) and transmission lines (1, 2) for the other half disposed on the other side of the reference circuitry (INV2);

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- wherein a second signal circuitry (Q3) for transmitting a second set of signals, and a second reference circuitry (INV3) for transmitting a second pair of complementary oscillating voltage references for enabling level conversion of the second set of signals;
- wherein each reference of the pair of references is compared against each signal of the first set of signals by a receiver (7, 8) to effect the level conversion;
- wherein at least one signal of the first set of signals is transmitted earlier than the first pair of references; and
- wherein at least one signal of the first set of the signals has a bit-to-bit skew greater than zero relative to the first pair of references because turning the transistor (Q1) on/off would introduce bit-to-bit skew greater than zero relative to the output signals of the inverter (INV2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 39 is rejected under 35 USC 103 (a) as being unpatentable over Koide et al (US 5,483,110) in view of Lauffer et al (US 4,713,827).

As understood, Koide et al discloses in Figures 1-15 a circuit with all of the limitations of the claims invention as discussed above but does not disclose that the first signal circuitry, the first reference circuitry, the second signal circuitry and the second reference circuitry are all disposed on a single chip. Lauffer et al teaches in Figure 1 a transceiver circuit (16) being

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PRIMARY EXAMINER

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implemented on an IC circuit (10) for the purpose of reducing the size. It would have been obvious to a person having skill in the art at the time the invention was made to implement the circuit of Koide et al on an IC as taught by Lauffer et al for the purpose of reducing the size.

Allowable Subject Matter

Claims 35 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The claim is allowable over prior art of record because the prior art does not show the first set of signals has a signal voltage swing and wherein each reference of the first pair of references has a reference voltage swing equal to or less than the signal voltage swing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dinh Le whose telephone number is (703) 305-3790. The examiner can normally be reached on Monday to Friday from 7:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (703) 308-4876. The fax phone number for this Group is (703) 308-7725.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.